

Application No.10/797,761  
Date: December 15, 2005

*Please amend the claims as follows:*

1. (Currently amended) A light pipe with uniform side-light emission, comprising:
  - a) a core comprising a polymer and a fluoropolymer cladding on the core; the cladding having a lower refractive index than the core; and
  - b) light-scattering material distributed within the core along an active section of light pipe in which side-light emission is desired;
  - c) the light-scattering material being distributed with a non-zero density gradient along a longitudinal axis of the light pipe chosen to achieve uniform side-light emission; and
  - d) the core lacking any significant variation in refractive index along the longitudinal axis as measured without regard to the presence of the light-scattering material.
2. (Original) The light pipe of Claim 1, wherein the light-scattering material comprises titanium dioxide.
3. (Previously presented) A light pipe with uniform side-light emission, comprising:
  - a) a core comprising a polymer and a fluoropolymer cladding on the core; the cladding having a lower refractive index than the core; and
  - b) light-scattering material distributed within the core along an active section of light pipe in which side-light emission is desired;
  - c) the light-scattering material being distributed in the core along the active section of the light pipe, substantially only in a radial swath, along the longitudinal axis of the light pipe, of substantially less than 360 degrees, so that light exits the light pipe in a directional manner.
4. (Original) The light pipe of Claim 3, wherein the radial swath less than about 180 degrees.
5. (Original) The light pipe of Claim 4, wherein the radial swath is more than about 10 degrees.
6. (Original) The light pipe of Claim 4, wherein the radial swath is less than about 90 degrees.
7. (Original) The light pipe of Claim 3, wherein the lumen output as between inlet and outlet portions of a the active section is within plus or minus 10 percent of the average value of each other
8. (Canceled).
9. (Canceled)
10. (Canceled)

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11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Previously presented) The light pipe of Claim 3, wherein the light-scattering material is uniformly distributed along a longitudinal axis of the active section of the light pipe substantially only in a radial swath, along the longitudinal axis of the light pipe, of substantially less than 360 degrees, so that light exits the light in a directional manner.

19. (Original) The light pipe of Claim 17, wherein the radial swath is less than about 180 degrees.

20. (Original) The light pipe of Claim 19, wherein the radial swath is more than about 10 degrees.

21. (Original) The light pipe of Claim 19, wherein the radial swath is less than about 90 degrees.

22. (Previously presented) The light pipe of Claim 17, wherein the lumen output as between inlet and outlet portions of the active section is within plus or minus 10 percent of the average value of each other.

23. (Previously presented) A light pipe with uniform side-light emission, comprising:

- a) a core comprising an acrylic polymer and a fluoropolymer cladding on the core; the cladding having a lower refractive index than the core; and
- b) light-scattering material being distributed in the core along an active section of the light pipe in which side-light emission is desired;
- c) the light-scattering material being distributed substantially only in a radial swath, along the longitudinal axis of the light pipe, of less than about 180 degrees, so that light exits the light pipe in a directional manner.

24. (Original) The light pipe of Claim 23, wherein the light-scattering material comprises titanium dioxide particles.

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25. (Original) The light pipe of Claim 24, wherein the radial swath is between about 30 and 45 degrees.
26. (Original) The light pipe of Claim 25, wherein the active section is between about 0.5 and 5 meters long.
27. (Original) The light pipe of Claim 26, wherein the active section is between about 1.5 and 2.5 meters long.
28. (Previously presented) The light pipe of Claim 26, wherein the particles are distributed with a non-zero density gradient along a longitudinal axis of the light pipe chosen to result in uniform illumination along the active section.
29. (Original) The light pipe of Claim 28, wherein the lumen output as between inlet and outlet portions of the active section is within plus or minus 10 percent of the average value of each other.
30. (New) A light pipe with uniform side-light emission, comprising:
  - a) a core comprising a polymer and a fluoropolymer cladding on the core; the cladding having a lower refractive index than the core; and
  - b) light-scattering material distributed within the core along an active section of light pipe in which side-light emission is desired;
  - c) the light-scattering material being distributed with a non-zero density gradient along a longitudinal axis of the light pipe chosen to achieve uniform side-light emission; and
  - d) the light-scattering material being distributed in the core along the active section of the light pipe, substantially only in a radial swath, along the longitudinal axis of the light pipe, of substantially less than 360 degrees, so that light exits the light pipe in a directional manner.
31. (New) The light pipe of Claim 30, wherein the light-scattering material comprises titanium dioxide.